Work Order ID 53934

November 23, 2009 2:53:16 PM

Accept

Item ID: D3936-1
Revision ID: A
Item Name: Sides

Start Date: 23/11/2009 **Start Qty:** 2.00
Required Date: 02/12/2009 **Req'd Qty:** 2.00
Reference:

Cust Item ID:
Customer:

Setup Start
Stop
Run Start
Stop

Approvals: **Process Plan:** BH **Date:** 09-11-23 **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

Draw Nbr	Revision Nbr
D3936	A

Pto →

100 — 0.00

Waterjet — 0.00

LB 9-12-9

FLOW CNC Waterjet

6061
.040

Memo
1-Cut as per Dwg D3936
Dwg Rev: A
Prog Rev: A
grain direction per dwg
2-Deburr if necessary

(4)

110 — QC2- Inspect parts off machine FAI/FAIB — 0.00

QC — 0.00

LB 9-12-9

Quality Control

Memo

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D 3936-1 **PAR #:** ______ **Fault Category:** Small Fab- Water Jet **NCR:** (Yes) No **DQA:** [signature] **Date:** 10-02-10

Resolution: Scrap **Disposition:** Scrap **QA: N/C Closed:** [signature] **Date:** 10/02/11

NCR: 53934		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B — Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
9/12/10	# 110	Found Qty 4 @ inspection with ~~the~~ extra holes at top ~~right ha~~ Left hand corner ~~R.C.~~ Program (WS operator) started in wrong	[initials] 10.SIU.2	- Scrap + Destroy No Replace extra was made.	[initials] [signature]	[initials] 09/12/10	[initials] 10.SIU.2	[initials] 09/12/10
		Location origin was off. ~~[illegible]~~ R.C: Lack of attention	[initials] 10.SIU.2	- update / correct the program, so it starts in the correct location	N/A	[initials] 10.02.10	[initials] 10.SIU.2	[initials] 10.02.09

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order ID 53934

November 23, 2009 2:53:16 PM

Item ID: D3936-1 **Accept** **Setup Start** **Stop**

Revision ID: A

Item Name: Sides

Start Date: 23/11/2009 **Start Qty:** 2.00 **Cust Item ID:**

Required Date: 02/12/2009 **Req'd Qty:** 2.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00				(X3)	X		
QC	**Memo**	0.00							
Quality Control									
121		0.00							
Small Fab	**Memo**	0.00							
Small Fab	1- C'sink holes as per dwg								
130		0.00				(3)			
Brake NC	**Memo**	0.00							
Brake NC	Bend and make joggle as per Dwg								

10/02/08 (3)

10/02/05

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Work Order ID 53934

November 23, 2009 2:53:16 PM

Item ID: D3936-1
Revision ID: A
Item Name: Sides
Start Date: 23/11/2009 **Start Qty:** 2.00
Required Date: 02/12/2009 **Req'd Qty:** 2.00
Reference:

Accept **Setup Start** **Stop**

Cust Item ID:
Customer:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC5- Inspect part completeness to step on W/O	0.00				(43)			
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: 6-A	0.00							
Packaging	Memo	0.00							
Packaging									
160	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

2) 30/09/09

10/02/09 (3)

10/02/09 MF 10-2-9

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector
10/02/09	145	Chemical conversion 10/02/09 perm change	BR	10-02-9	3		
10/02/09	146	Qc 3 10/02/09 perm change		10-02-9			

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

Picklist Print

November 23, 2009 2:53:24 PM

Work Order ID: 53934

Parent Item: D3936-1RevA

Parent Item Name: Sides

Comments:

Start Date: 23/11/2009 **Required Date:** 02/12/2009

Start Qty: 2.00 **Required Qty:** 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M6061T6S.040		Purchased	No			100	sf	249.0005	5.7895	11.6	18 9-12-09	

6061-T6 .040 Sheet

Warehouse Location	Loc Qty	Loc Code	
Main Warehouse			
MAT	249.0005		
100742	3.3		
102723	5.93		
105842	12		
106747	5.7516		
107461	11.7841		
109396	17.9316		
111224	23.0629		
113004	167.7403		113004
19380	1.5		

(4)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	53934
Description: Sides	Part Number:	D3936-1
Inspection Dwg: D3936 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

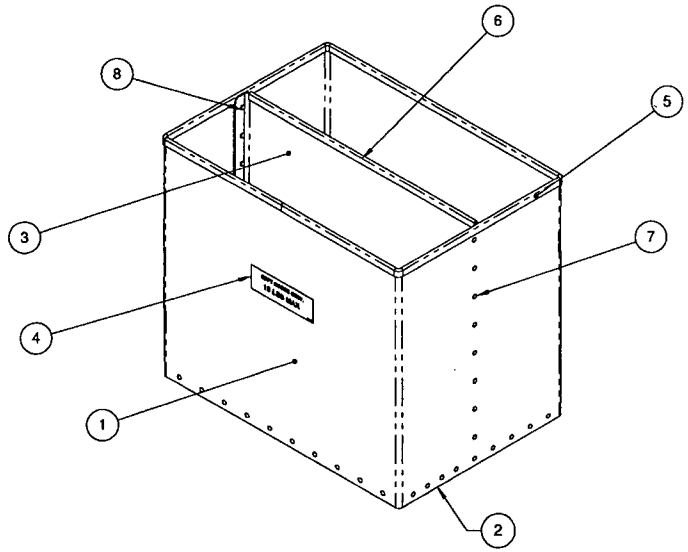
[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	.100	✓			
0.300	+/-0.010	.301	✓			
1.200	+/-0.010	1.198	✓			
8.400	+/-0.010	8.401	✓			
1.200	+/-0.010	1.201	✓			
10.100	+/-0.010	10.100	✓			
0.300	+/-0.010	.300	✓			
1.200	+/-0.010	1.200	✓			
2.100	+/-0.010	2.1001	✓			
0.700	+/-0.010	.699	✓			
4.698	+/-0.010	4.698	✓			
9.900	+/-0.010	9.900	✓			
1.100	+/-0.010	1.100	✓			
18.996	+/-0.010	18.996	✓			
2.100	+/-0.010	2.099	✓			
0.700	+/-0.010	.701	✓			
23.993	+/-0.010	23.993	✓			
2.700	+/-0.010	2.703	✓			
0.900	+/-0.010	.903	✓			
39.198	+/-0.010	39.198	✓			
0.040	+/-0.010	041	✓			

Measured by:	IB	Audited by:	D	Prototype Approval:	N/A
Date:	9-12-9	Date:	09/12/10	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.09.21	New Issue	KJ	

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	1	D3936-1	SIDES
2	1	D3936-3	BOTTOM
3	1	D3936-5	DIVIDER
4	1	D3938-3	PLACARD
5	1	D3941-40	RUBBER CUSHION
6	1	D3941-12	RUBBER CUSHION
7	56	MS20426AD3-4	RIVET
8	8	MS20426AD3-5	RIVET



D3936-041 MAPBOX ASSEMBLY

ASSEMBLY INSTRUCTIONS

1. BEND D3936-1/-3/-5 PARTS PER SHEETS 2-7.
2. POSITION D3936-5 DIVIDER IN PLACE INSIDE THE D3936-1 SIDES AND CLECO IN PLACE.
3. POSITION THE D3936-3 BOTTOM IN PLACE AGAINST THE D3936-5 DIVIDER AND INSIDE THE D3936-1 SIDES.
4. TRANSFER DRILL 10X Ø0.098 (#40 DRILL) HOLES FROM THE D3936-3 BOTTOM TO THE D3936-5 DIVIDER. PLACE CLECOS IN TRANSFER DRILLED HOLES TO MAINTAIN ALIGNMENT AS THEY ARE DRILLED.
5. TRANSFER DRILL 38X Ø0.098 HOLES FROM D3936-1 SIDES TO D3936-3 BOTTOM. PLACE CLECOS IN TRANSFER DRILLED HOLES TO MAINTAIN ALIGNMENT AS THEY ARE DRILLED.
6. REMOVE ALL CLECOS AND COUNTERSINK 64X EXTERIOR HOLES Ø0.179 X 100°. DEBURR ALL HOLES IN ALL PARTS.
7. REASSEMBLE PARTS USING CLECOS IN EVERY THIRD HOLE TO MAINTAIN ALIGNMENT.
8. RIVET D3936-1 SIDE TO D3936-5 DIVIDER USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
9. RIVET D3936-5 DIVIDER TO D3936-3 BOTTOM USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
10. RIVET D3936-3 BOTTOM TO D3936-1 SIDE USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
11. POWDER COAT ASSEMBLY PER NOTE 2.
12. TEST FIT RUBBER CUSHION TO TOP EDGE OF MAPBOX. TRIM AS REQUIRED FOR PROPER FIT.
13. REMOVE RUBBER CUSHION.
14. APPLY SMALL BEAD OF SILICONE/ADHESIVE TO TOP EDGE OF MAPBOX.
15. SLIDE RUBBER CUSHION OVER EDGE AND PRESS INTO SILICONE/ADHESIVE.
16. WIPE OFF ANY EXCESS SILICONE/ADHESIVE BEFORE IT DRIES/CURES.
17. APPLY D3938-3 PLACARD AS SHOWN.
18. ALLOW SEALANT/ADHESIVE TO CURE/DRY 24 HRS BEFORE SHIPPING PART.

RELEASED
2009 -08- 28

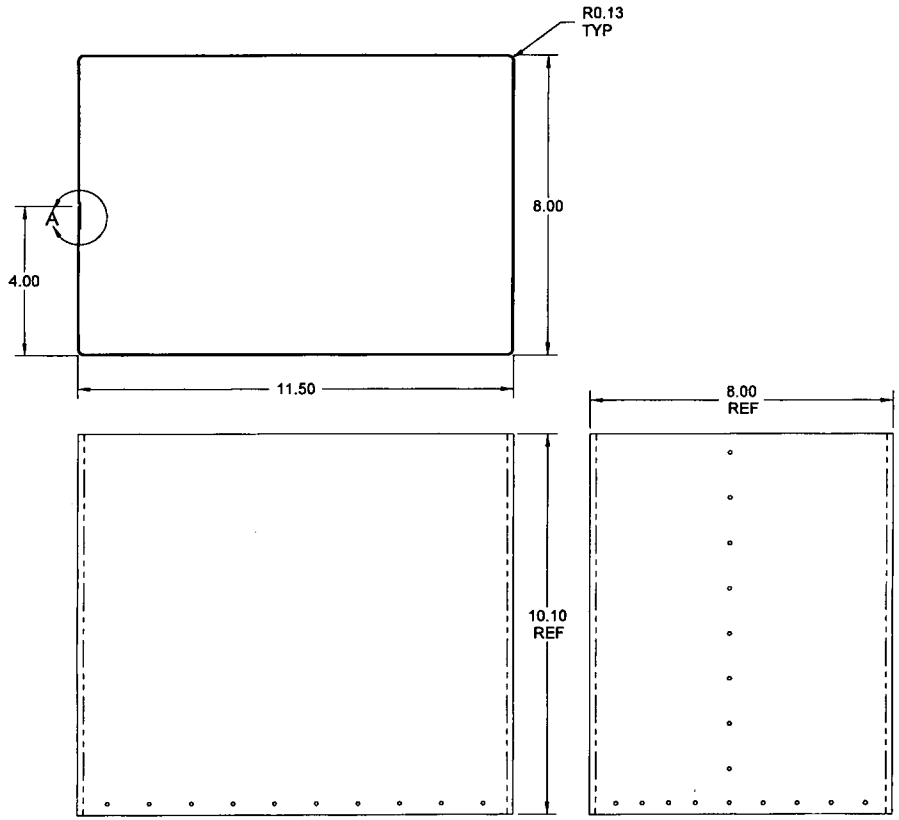
NOTES:
1) MATERIAL: N/A
2) FINISH: POWDER COAT "BLACK SANDTEX" (4.3.5.7) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3936-041" AND B/N USING A WHITE FINE POINT PAINT MARKER
7) WEIGHT: 2.54 lbs

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE		09.07.08

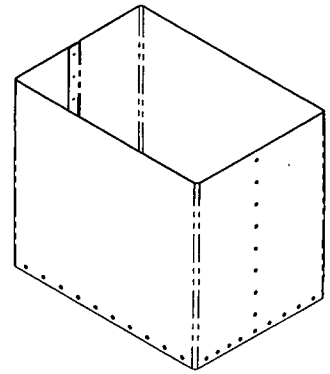
DESIGN	
DRAWN	
CHECKED	
MFG. APPR.	
APPROVED	
DE APPR.	
DATE	09.07.08

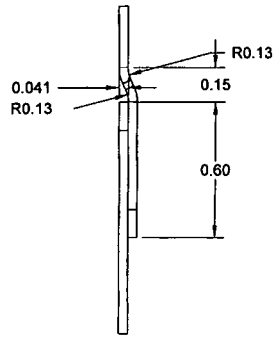
DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3936 REV. A
SHEET 1 OF 7
TITLE MAPBOX SCALE NTS



D3936-1 SIDES
MADE FROM D3936-1F





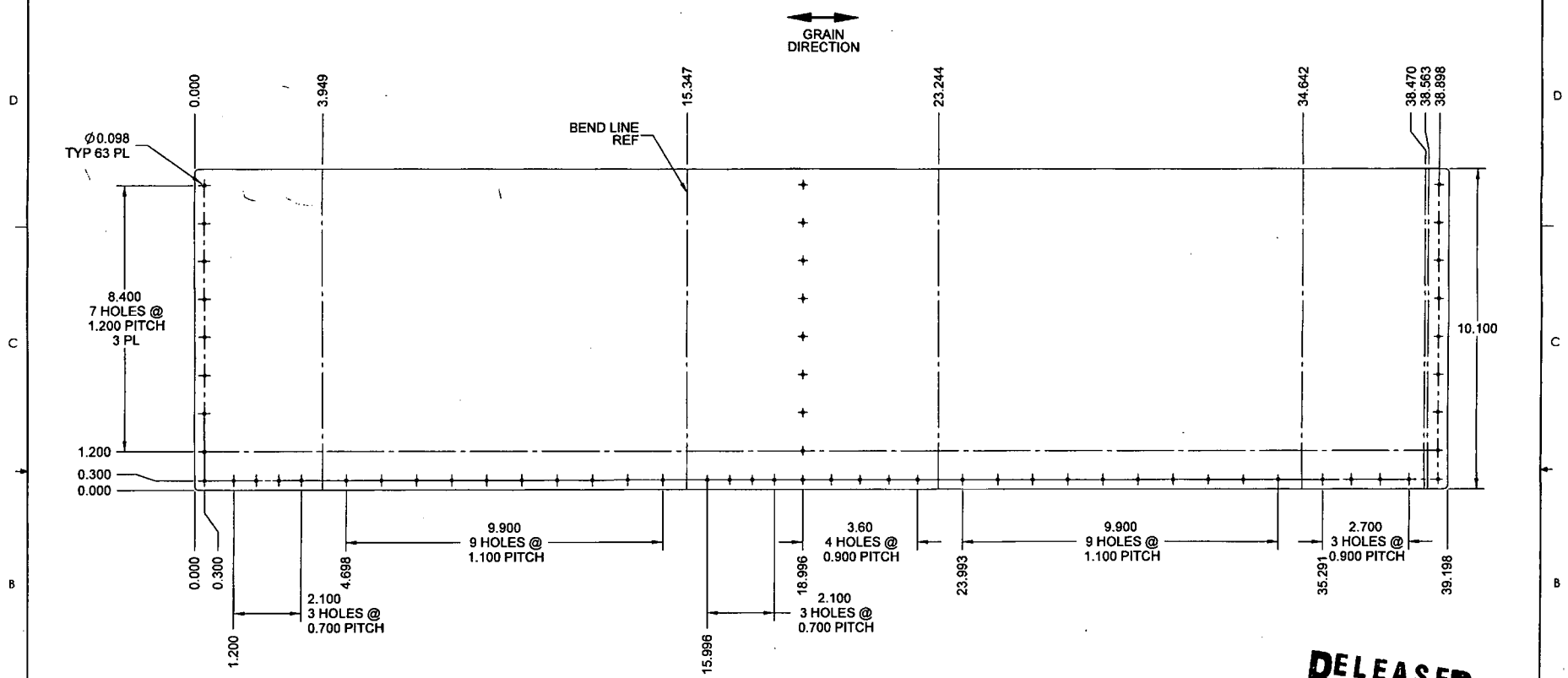
DETAIL A
SCALE 5x

RELEASED
2009 -08- 28

W/O 539346

NOTES:
1) MATERIAL: MADE FROM D3936-1F
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.54 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		DRAWING NO. REV. A
CHECKED	ASS	D3936 SHEET 2 OF 7
MFG. APPR.		TITLE SCALE
APPROVED		MAPBOX NTS
DE APPR.		
DATE	09.07.08	



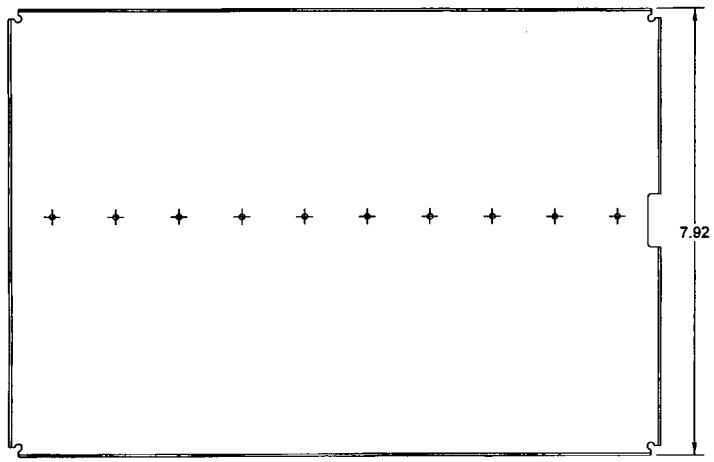
D3936-1F SIDES FLAT PATTERN

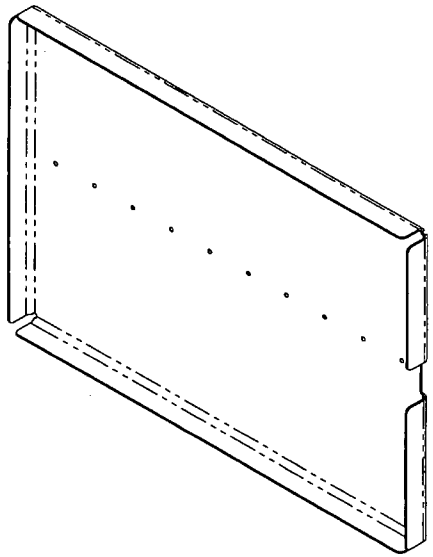
RELEASED
2009 -08- 28

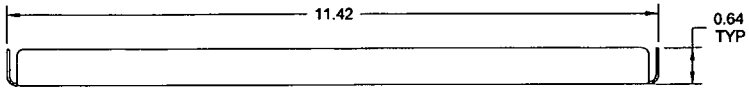
w/o 53934

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF DART SPEC M6061T6S.040)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 1.54 lbs

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		DRAWING NO. D3936 REV. A
CHECKED	A.S.S	SHEET 3 OF 7
MFG. APPR.		TITLE MAPBOX
APPROVED		SCALE NTS
DE APPR.		
DATE	09.07.08	







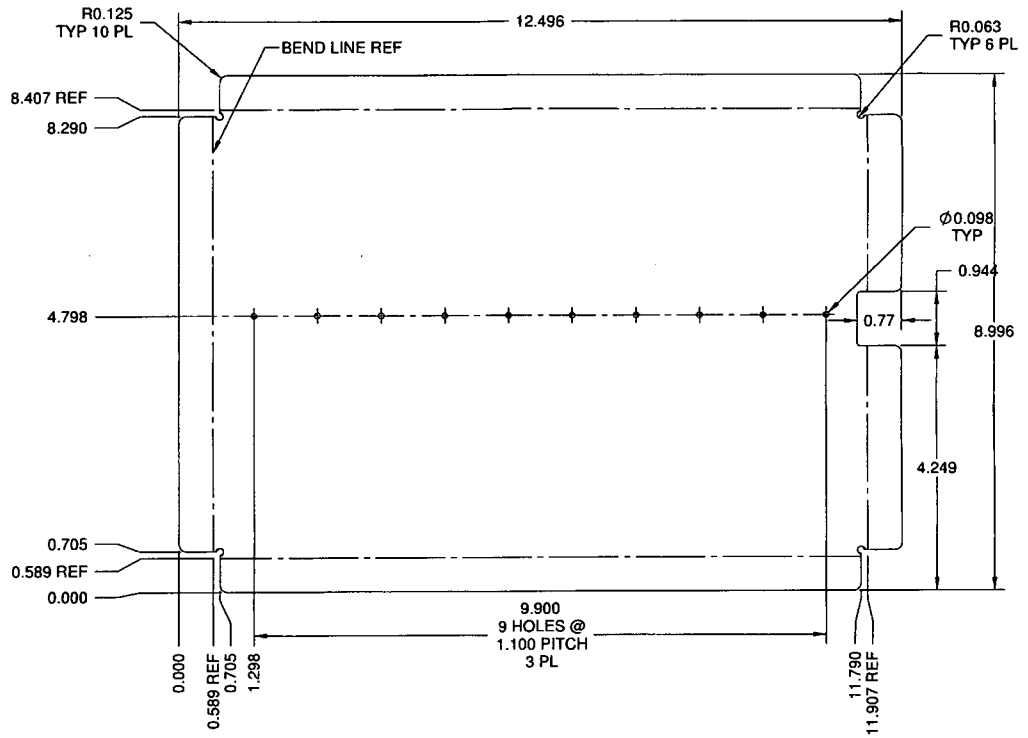
D3936-3 BOTTOM
MADE FROM D3936-3F

RELEASED
2009 -08- 28

W/O 53934

NOTES:
1) MATERIAL: MADE FROM D3936-3F
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.43 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3936 — REV. A — SHEET 4 OF 7
MFG. APPR.		TITLE MAPBOX — SCALE NTS
APPROVED		
DE APPR.		
DATE 09.07.08		



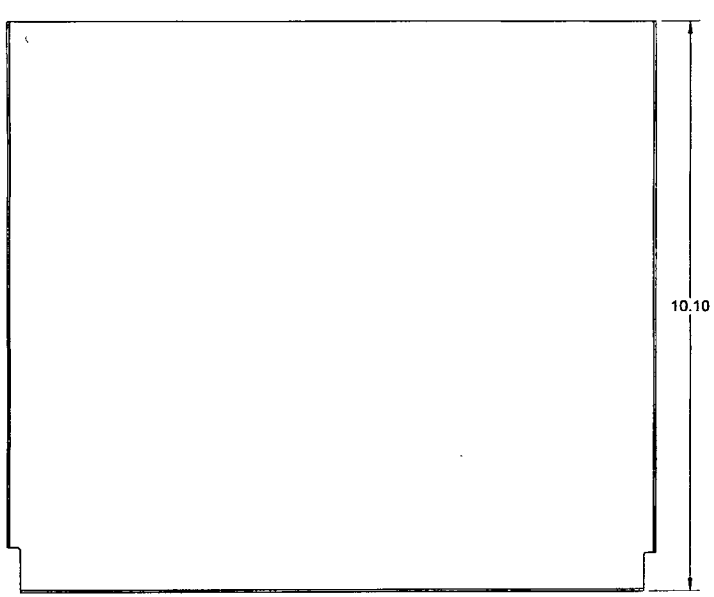
D3936-3F BOTTOM FLAT PATTERN

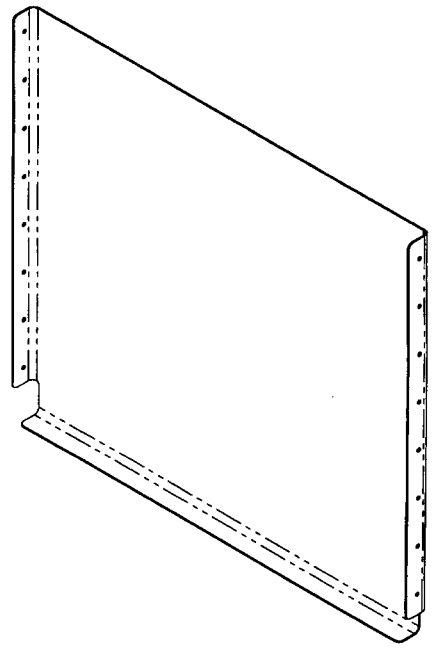
RELEASED
2009 -08- 28

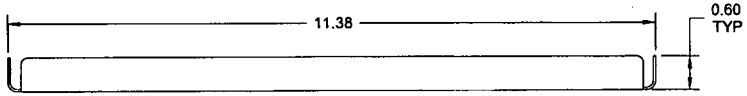
W/O 53931

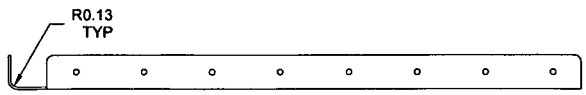
NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF DART SPEC M6061T6S.040)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.43 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3936 — REV. A — SHEET 5 OF 7
MFG. APPR.		TITLE MAPBOX — SCALE NTS
APPROVED		
DE APPR.		
DATE 09.07.08		









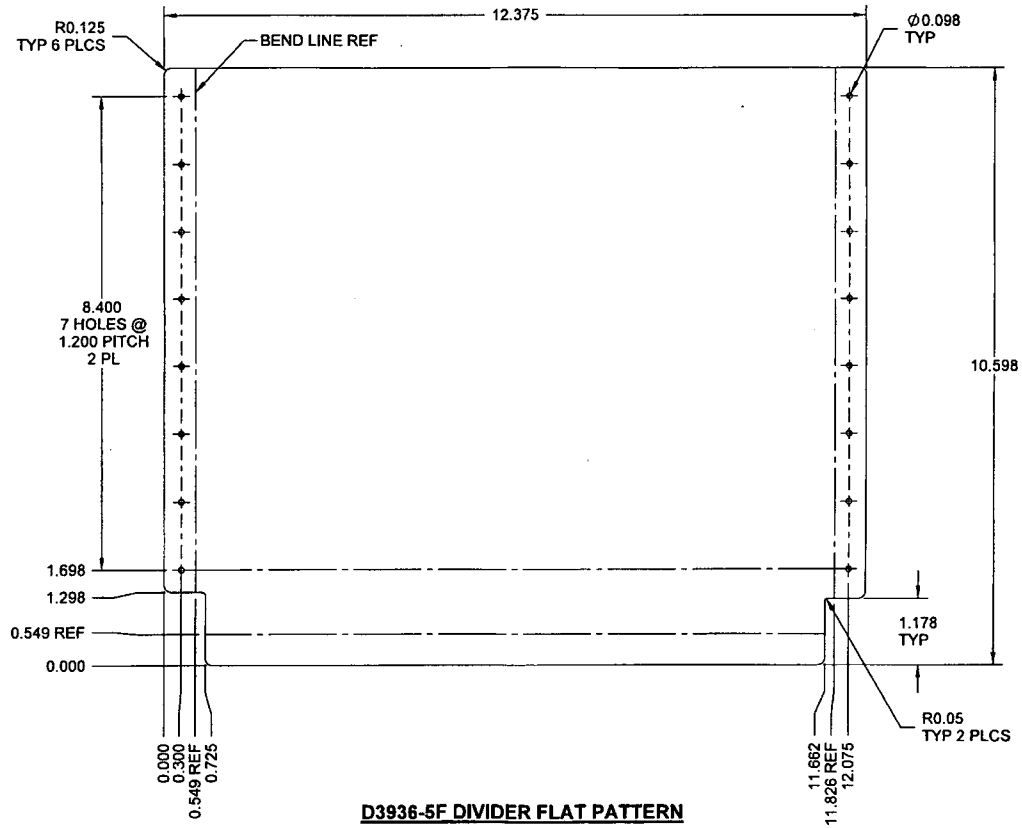
D3936-5 DIVIDER
MADE FROM D3936-5F

RELEASED
2009 -08- 28

W/O 53934

NOTES:
1) MATERIAL: MADE FROM D3936-5F
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.50 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D3936 REV. A
MFG. APPR.		SHEET 6 OF 7
APPROVED		TITLE MAPBOX SCALE NTS
DE APPR.		
DATE 09.07.08		



D3936-5F DIVIDER FLAT PATTERN

RELEASED
2009 -08- 28

w/o 53934

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF DART SPEC M6061T6S.040)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.50 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3936 REV. A
MFG. APPR.		SHEET 7 OF 7
APPROVED		TITLE MAPBOX SCALE NTS
DE APPR.		
DATE 09.07.08		